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Nomenclatural notes on Malagasy *Syzygium* Gaertn. (Myrtaceae)

James W. Byng, Peter B. Phillipson & Neil Snow

Abstract

BYNG, J. W., P. B. PHILLIPSON & N. SNOW (2015). Nomenclatural notes on Malagasy *Syzygium* Gaertn. (Myrtaceae). *Candollea* 70: 151-155. In English, English and French abstracts. DOI: <http://dx.doi.org/10.15553/c2015v701a13>

Several nomenclature issues came to light whilst preparing a revision of *Syzygium* Gaertn. (Myrtaceae) for Madagascar, resulting in the new combinations *Syzygium cuneifolium* (Baker) Byng, N. Snow & Phillipson and *Syzygium thouvenotii* (Danguy) Byng, and a clarification of the taxonomic status of *Eugenia tanalensis* Baker.

Résumé

BYNG, J. W., P. B. PHILLIPSON & N. SNOW (2015). Notes nomenclaturales sur les *Syzygium* Gaertn. (Myrtaceae) de Madagascar. *Candollea* 70: 151-155. En anglais, résumés anglais et français. DOI: <http://dx.doi.org/10.15553/c2015v701a13>

Plusieurs problèmes de nomenclature sont apparus en préparant une révision de *Syzygium* Gaertn. (Myrtaceae) pour Madagascar. Leur résolution nécessite les nouvelles combinaisons *Syzygium cuneifolium* (Baker) Byng, N. Snow & Phillipson et *Syzygium thouvenotii* (Danguy) Byng, ainsi qu'une clarification du statut taxonomique d'*Eugenia tanalensis* Baker.

Keywords

MYRTACEAE – *Syzygium* – *Eugenia* – Madagascar – Nomenclature

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Introduction

Syzygium Gaertn. is the largest genus in *Myrtaceae*, comprising approximately 1,200 species distributed in the tropics and subtropics of the Old World (BIFFIN et al., 2010; WCSP, 2015). In the past *Syzygium* was treated as a section of *Eugenia* L. by many authors, including BENTHAM & HOOKER (1865), HENDERSON (1949) and, for Madagascar, PERRIER DE LA BÂTHIE (1952, 1953), all of whom adopted a broad concept of *Eugenia*. Subsequent anatomical work by SCHMID (1972) demonstrated that *Eugenia* and *Syzygium* are independent lineages, and molecular surveys by various authors have confirmed their placement in different tribes of the *Myrtaceae* (e.g. WILSON et al., 2001, 2005; BIFFIN et al., 2010). In accordance with this changed generic circumscription, LABAT & SCHATZ (2002) established new name combinations for species from Madagascar formerly included in *Eugenia*, and together with an addition combination established by GOVAERTS et al. (2008) and two new species described by SNOW (2010), *Syzygium* is currently represented in Madagascar by 19 species (MADAGASCAR CATALOGUE, 2015).

In the course of the work undertaken by one of us (JWB) towards a better understanding of global patterns of diversity in *Syzygium* (BYNG, 2014), it became apparent that a better understanding of the Malagasy *Syzygium* would be a vital element. Furthermore, botanical inventory in Madagascar has moved ahead considerably since the revisionary work of PERRIER DE LA BÂTHIE (1952, 1953), and much of the newly available material cannot be adequately identified and we have noted that approximately half of the herbarium specimens at Paris (P) and Kew (K) were not identified to species or were identified incorrectly. It has become clear that the Malagasy *Syzygium* are in need of complete revision, and this work is now underway. Apart from reviewing and revising species delimitations, and the description of additional new species, three nomenclatural issues have arisen that do not need to wait until the full revision can be completed. We address these in this article, which will enable us to provide updated content for the Vascular Plants of Madagascar project (MADAGASCAR CATALOGUE, 2015), and will be useful for other workers involved with the Malagasy flora. Scans of the specimens cited in this article can be viewed on the online databases of the relevant institutions.

A new combination and status for *Eugenia condensata* var. *thouvenotii* Danguy

The taxon was first described as a variety of *Eugenia condensata* by Danguy but was reduced to synonymy under *E. emirnensis* by PERRIER DE LA BÂTHIE (1952). *Syzygium thouvenotii* (Danguy) Byng is clearly a distinct species from both of these species with its small obovate leaves, conspicuous revolute margins, prominent secondary and tertiary venation, and small flowers. These characters contrast to the larger leaves and flowers, often acute or cuspidate apices, and more or less

flat blades of both *S. condensatum* and *S. emirnensis*.

***Syzygium thouvenotii* (Danguy) Byng, comb. & stat. nov.**

≡ *Eugenia condensata* var. *thouvenotii* Danguy in Lecomte, Bois Analamaz.: 106. 1922.

Typus: MADAGASCAR. Prov. Toamasina: Analamazotra, 1919, *Thouvenot* 124 (holo-: P [P00118091]!; iso-: K [K000771835]!, MO [MO-313641]!, P [P00118092]!).

Notes. – *Syzygium thouvenotii* is widespread in the eastern and northern humid forests of Madagascar from (200–)1000–1680 m. Plants from higher elevation bear smaller leaves, and *Randrianaivo* 720 (MO, P) has leaves larger than most other material, and occurs at a much lower altitude (200 m). Authorship of this taxon has been attributed to “Danguy ex Lecomte”, however LECOMTE (1922) clearly attributed its authorship to Pierre Danguy, therefore following ICN Art. 46.2 Danguy’s name alone is the correct citation.

Transfer of *Eugenia cuneifolia* Baker to *Syzygium*

In his treatment of the Malagasy *Myrtaceae*, PERRIER DE LA BÂTHIE (1952, 1953) reduced *Eugenia cuneifolia* Baker to a taxonomic form of the typical variety of *E. emirnense* Baker. LABAT & SCHATZ (2002) followed Perrier’s species concept, including *E. cuneifolia* within their *Syzygium emirnense* (Baker) Labat & G. E. Schatz, but did not consider Perrier’s taxonomic forms or varieties worthy of further recognition. We believe that *S. cuneifolium* is quite distinct from *S. emirnense* and that it merits recognition at species level and we therefore establish the necessary new combination here. *Syzygium cuneifolium* can be clearly distinguished from *S. emirnensis* on the basis of its obovate leaves, cuspidate apices, and conspicuous rigid venation on both surfaces.

***Syzygium cuneifolium* (Baker) Byng, N. Snow & Phillipson, comb. nova.**

≡ *Eugenia cuneifolia* Baker in J. Linn. Soc., Bot. 20: 144. 1883.

≡ *Eugenia emirnensis* f. *cuneifolia* (Baker) H. Perrier in Mém. Inst. Sci. Madagascar, Sér. B, Biol. Vég. 4: 187. 1952.

Typus: MADAGASCAR: Central, *sine loc.*, *Baron* 1254 (lecto-: K [K000312827]!; isolecto-: P [P00118100]!) (Lectotype designated by PERRIER DE LA BÂTHIE, 1952).

= *Eugenia emirnensis* var. *submaritima* H. Perrier in Mém. Inst. Sci. Madagascar, Sér. B, Biol. Vég. 4: 187. 1952 [nom. nud.].

Notes. – Authorship for *Eugenia cuneifolia* has been cited incorrectly as “Bojer ex Baker”. On publishing *E. cuneifolia* in *Eugenia* section *Syzygium* Triana & Planch., BAKER (1883) referred to Bojer’s unpublished manuscript name *Syzygium cuneifolium*, but following ICN Art. 46.4 (McNEILL et al., 2012) the correct authorship of the name should be attributed to Baker alone.

Syzygium cuneifolium is one of the most widespread *Syzygium* species in Madagascar. It occurs in humid, coastal and montane forests of eastern Madagascar at elevations up to 1000(–1500) m.

The littoral specimens of *S. cuneifolium*, which correspond to Perrier de la Bâthie’s invalid name *Eugenia emirnenensis* var. *submaritima* H. Perrier (lacking latin diagnosis, see McNEILL et al., 2012: Art. 39.1), differ somewhat from specimens at higher altitudes in having less prominent venation and an apiculate rather than cuspidate leaf apex. However, overall variation suggests the species is widespread and expresses variation depending on altitude, habitat and soil type (e.g. coastal sands and wet humid soils). Subspecific ranks are not designated here but further study may warrant their recognition. The relationships of *Syzygium cuneifolium* and *S. condensatum* are discussed further below under our note on the latter.

The identity of *Eugenia tanalensis* Baker

Eugenia tanalensis and *E. condensata* Baker were described by BAKER (1882) to accommodate two closely-related species, differing mainly in the shape of the leaves and inflorescences, with both species being noted as “a near ally” or “near neighbour” of the Mauritian *E. glomerata* Lam. *Eugenia tanalensis* was typified by *Baron 295* from “Forests of Tanala” and was reported as “Gathered before in Central Madagascar by Bojer”. *Eugenia condensata* was typified by *Baron 237* from “Central Madagascar”, and following its description, Baron stated “We have four allied species from Madagascar already, gathered by Bojer, Meller, and Gerrard”. It is not entirely clear which four species Baker was referring to, and confusingly he wrote a year later under *E. phillyreaefolia* Baker that “This and the five other species here described are all near neighbours of the Mauritian *E. glomerata*” (BAKER, 1883). Among these five species was *E. cuneifolia* (see our treatment above), which was collected by Meller, but we have not found any specific mention of Gerrard as the collector of any of Baker’s species of *Eugenia* from Madagascar. BAKER (1883, 1887) later added two more Malagasy species one of which, *E. aggregata* Baker, was noted as “Near *E. tanalensis*”.

PERRIER DE LA BÂTHIE (1953) omitted *E. tanalensis* from his formal treatment of species, regarding it as incompletely known (“espèce incomplètement connue”), mysteriously he cited the collection *Baron 1477* as the type, noting that its flowers were parasitised and therefore inadequately known.

He went on to state that it may represent the same species as his newly described *E. onivensis* H. Perrier. LABAT & SCHATZ (2002) also treated the species as of “Uncertain Systematic Position”, noting that the type, *Baron 295* was missing at Kew. Following a thorough search at Kew by JWB, several specimens annotated “*Eugenia (Syzygium) tanalensis* Baker” presumably in Baker’s hand were found. One of these is a sheet of *Baron 1477* [K000312797] mentioned above, which bears no indication of being regarded as a type by Baker, it was examined by Jean-Noël Labat in 1999 and identified as *Syzygium onivensis* (H. Perrier) Labat & G. E. Schatz. A second sheet appears to be a mixed gathering that we believe includes the lost type specimen [K000771833]. The specimen on the right bears a label written by hand “295 *Eugenia Tanala*: forest, Central Madagascar Coll. Barson recd 2/81” and in addition, after “*Eugenia (Syzygium) tanalensis* Baker” is the mark “!” suggesting that the sheet was seen by Baker for the description of the species (see Fig. 1). There is no record of a collector by the name of Barson listed by DORR (1997) as active in Madagascar. A search for the collector Barson in the Kew HERBARIUM CATALOGUE (2015) produced two specimens databased and scanned under this collector name, both from Madagascar and both bearing handwritten labels similar to the specimen described above and numbered 276 and 324. The latter is annotated as the type of *Dombeya modesta* Baker, which is cited as *Baron 324* in its protologue. We have also searched for specimens at Kew databased under the collector *Baron* in the number range of these specimens and found that all the specimens with scanned images available on-line have “Barson” labels when an original printed label is not present. It appears that the error was made when handwritten labels were produced for the Baron specimens received at Kew in February 1881. The other material on the left of the same sheet is labelled “*Eucalyptus* sp. Bojer” in Baker’s hand, and we suspect this is the material referred to by Baker when he wrote in the protologue “Gathered before in Central Madagascar by Bojer”. A third sheet at Kew bearing “*Eugenia (Syzygium) tanalensis* Baker” [K000312796] consists of two gatherings, with the lower element labelled “Herb. ex Blackburn” with the invalid name *Eugenia cuspidata* in Bojer’s hand.

BAKER (1882) noted that *E. tanalensis* has ovate leaves with cuspidate apices and generally open inflorescences. In contrast, *E. condensata* has oblong-lanceolate leaves with acute apices and dense inflorescences. However, the holotypes of both species are similar, and specimens of the species as a whole form a broadly coherent group with a gradient between acute to distinctly cuspidate leaf apices and open to dense inflorescences. We here place *E. tanalensis* as a synonym of *Syzygium condensatum*.

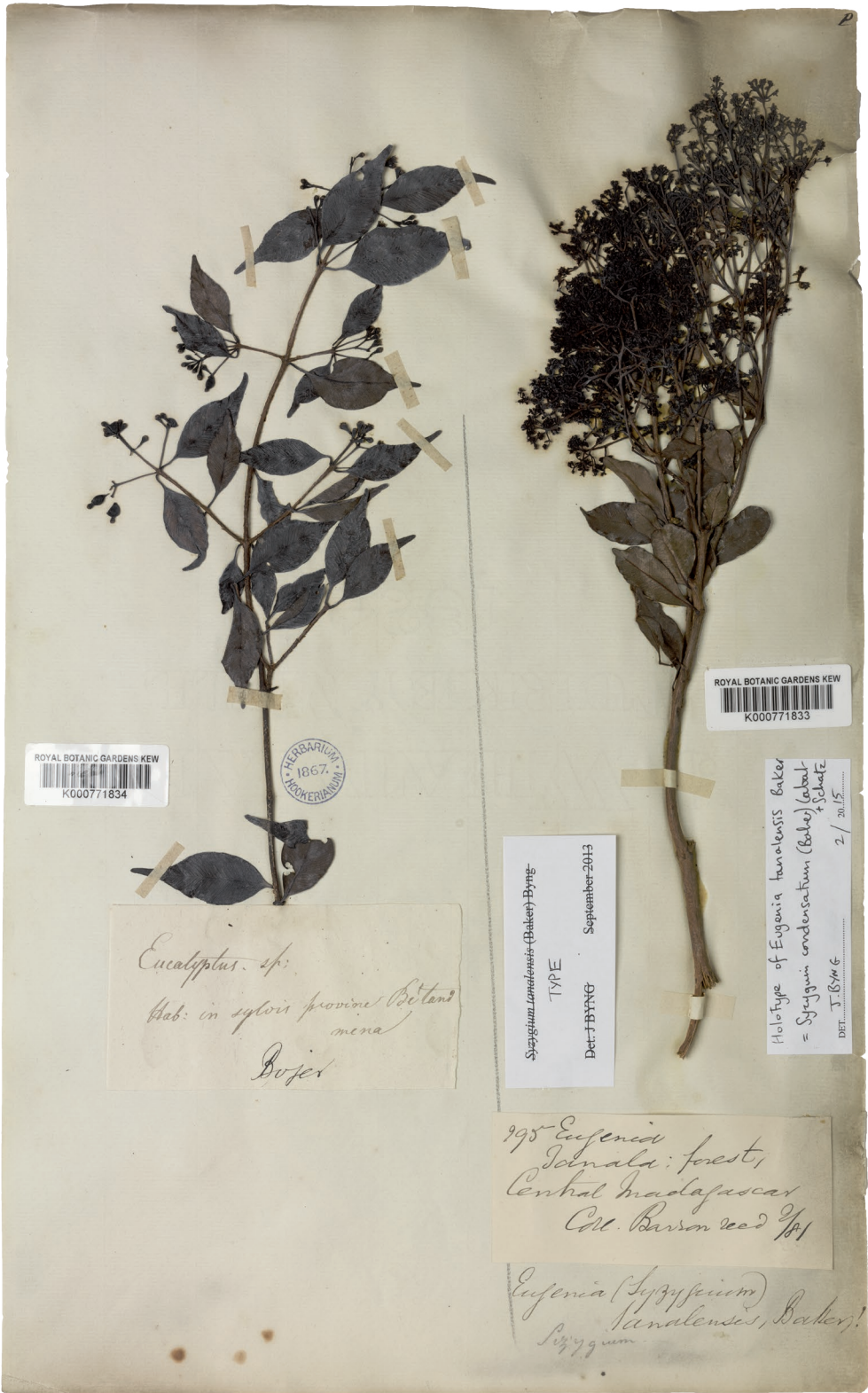


Fig. 1. – Sheet bearing the holotype (specimen on the right) of *Eugenia tanalensis* Baker at K [K000771833], with the handwritten label “295 *Eugenia* Tanala: forest, Central Madagascar Coll. Barson recd 2/81” visible in the lower right.
[© Royal Botanic Gardens, Kew]

Syzygium condensatum (Baker) Labat & Schatz in Novon 12: 202. 2002.

≡ *Eugenia condensata* Baker in J. Bot. 20: 112. 1882.

Typus: MADAGASCAR: Central, Betsileoland, *s.d.*, Baron 237 (holo-: K [K000312849]!; iso-: P [P00118082]!).

= *Eugenia tanalensis* Baker in J. Bot. 20: 111. 1882.

Typus: MADAGASCAR: *sine loc.*, *s.d.*, Baron 295 (holo-: K [K000771833]!), *syn. nov.*

Notes. – *Syzygium condensatum* is relatively common in the humid montane forests on the Central High Plateau, particularly around Antananarivo, at elevations of (500-) 1000-1500 m.

The species is morphologically similar to *S. cuneifolium*, but *S. condensatum* generally occurs at higher altitudes (1000 m and above), individuals have less dense inflorescences, thinner inflorescence axes, and smaller leaves with subrigid venation. In contrast, *S. cuneifolium* occurs mostly below 1000 m and has denser and more compact inflorescences, inflorescence axes that are quite pale and somewhat thicker, and leaves having highly prominent venation. Further field studies are needed to examine the relationships of *S. condensatum* and *S. cuneifolium* in more detail and determine what overlap, if any, occurs both geographically and reproductively.

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